

U - Gas News Report

Unconventional Gas Activities in the World

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CEDIGAZ LNG SERVICE

A COMPLETE DATA SERVICE FOR THE LNG ANALYST

The LNG Service provides the LNG analyst with all the data needed to follow the developments of the fast moving LNG market. The LNG Service includes comprehensive, quarterly updated, worldwide databases on liquefaction projects, regasification projects, long-term gas supply contracts and LNG trade between countries, as well as monthly bulletins on traded volumes and prices. The company reports allow for an easy assessment and benchmarking of the main players in the market and the CEDIGAZ LNG Outlook provides CEDIGAZ's views on medium and long-term LNG market perspectives.

FEATURES

DATABASES

- **Liquefaction plants:** More than 150 existing and planned liquefaction facilities. Quarterly update.
- **Regasification terminals:** More than 200 existing or planned regasification terminals in the world. Quarterly update.
- **Long-term Supply contracts:** Includes over 200 sales/tolling contracts currently in force plus contracts with projects under development. Quarterly update.
- **LNG trade:** annual LNG flows between exporting and importing countries since 1970.

LNG MONTHLY BULLETIN

Monthly LNG import volumes and prices by country of origin for 19 countries representing 90% of the global trade.

CEDIGAZ LNG OUTLOOK

CEDIGAZ's medium and long-term perspectives on LNG supply and demand.

COMPANY REPORTS

A summary of the information of the LNG database by company.

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CBM

PRODUCTION

CHINA:

Green Dragon confident of big production uplift in 2015

Green Dragon Gas expects production to **rise by 50% this year** as drilling steps up a pace at its unconventional gas assets in China.

Production from two fields totalled **8.2bcf in 2014**, with gross sales **6 Bcf**, but Green Dragon expects this to **rise to 12Bcf** in the current year as it will drill thirty wells using if LiFaBric technology on the GSS block.

A further **22 wells** are due to be completed soon and the total number producing overall will rise to **214 from 144**. (April 21, 2015)

04/21/2015

PUBLICATIONS

AUSTRALIA:

Coal seam gas can provide certainty in a time of market chaos

You may have seen conflicting reports lately about Australia's gas supply. On one hand, the recently released Energy White Paper assumes the gas market is facing a looming shortage.

On the other hand, an Australian Energy Market Operator report released this week forecasts there will be no significant shortage in the short term.

The white paper uses its assumption to argue for developing other gas sources, particularly unconventional ones such as coal seam gas. And the Domestic Gas Strategy, also released this week, makes clear it's full steam ahead on coal seam gas.

But if there's no shortage, will we still need coal seam gas?

Is there a gas crisis?

One of the underlying assumptions of the white paper is that unconventional gas projects such as coal seam gas are necessary because conventional gas reserves have been depleted. The reasons for this supposedly looming shortage are regulatory barriers and moratoriums.

The paper notes that gas shortages, "whether real or perceived", have the potential to destabilise local gas markets.

There is, however, a strong suggestion that concerns about gas shortages are misplaced. The AEMO report forecasts no shortage in supply gas for any of Australia's eastern and southeastern gas markets over the short term to 2019.

There are several different reasons for this.

First, lower consumption in Queensland and New South Wales combined with improvements in infrastructure have lowered supply concerns.

The expanded capacity of the Victoria-NSW connection and upgrades to pipelines between South Australia and the eastern states have reduced the prospect of a shortage over the next few years.

Australia enters the international market

Matt Zema, managing director and chief executive of AEMO, noted that this shift in forecast is the product of a dynamic gas landscape and stems from the fact that the eastern and south eastern markets are experiencing rapid change.

This change corresponds with the start of LNG exports. Major LNG production is occurring both in Australia and internationally.

The Gorgon LNG plant from Chevron is predicted to produce 15.6 million tonnes of LNG each year. The Gladstone facility in which Santos is involved is predicted to produce 7.8 million tonnes each year.

Australia Pacific LNG along with Origin Energy and Conoco Phillips (United States) and Sinopec (China) are also predicted to produce 7-10 cargoes by the end of 2015, prior to their longer term contractual commitments taking effect in 2016.

Further, whilst the Darwin Bayu-Undon plant is contracted for supply until 2023, the prospect of any expansion of LNG production in Darwin as an alternative to developing floating LNG facilities, will also contribute to supply.

These forecasts indicate that the future production of LNG is likely to outnumber demand and that any shortage in the supply of gas will be temporary. The overall prediction is that if 50% of all non-approved LNG capacity goes ahead, there will be excess production by 2020. (April 17, 2015)

04/17/2015

SHALE GAS

EXPLORATION

CHINA:

China discovers 27 bcm of exploitable shale gas in

China discovered almost **27bcm of exploitable shale gas reserves in 2014**, state media said on Thursday, citing the Ministry of Land and Resources.

Exploitable natural gas reserves grew by **475 bcm last year** and exploitable oil reserves rose 187 million tonnes, reports said.

China is in the early stages of developing its shale gas deposits, with Sinopec Corp., the country's second-largest state firm taking a lead role.

Its Fuling field in the country's southwest, which has so far produced **1.1 bcm of gas**, is on track to reach a capacity of **5 bcm by 2015 and 10 bcm in 2017**.

The Ministry of Land and Resources has previously pegged China's potentially recoverable shale gas resource at **25.08tcm**.

That compares to a US Energy Information Agency estimate in March 2012 that put China's technically recoverable shale gas reserves at **36.1 tcm**, exceeding US reserves of **24.4 tcm**. (April 17, 2015)

04/17/2015

AUSTRALIA:

Santos scales back exploration in Northern Territory

Gas giant Santos will scale back its unconventional gas exploration in the Northern Territory this year. Speaking at the company's annual general meeting in Adelaide, public affairs manager Matt Doman blamed low commodity prices.

"We have to adjust our business plans to the global financial environment, particularly in oil and gas," he said. "We are not doing as much this year as we would have envisaged."

"However we still very much believe in the potential of the interests we have in the Northern Territory. "We believe that potential is very significant and look forward to pursuing it over the longer term."

On the scale of the cuts in the Northern Territory, Mr Doman said this was always going to be a slow year for Santos. "We were going to drill a relatively small number of wells this year, possibly in the range of three or four," he said.

"We are now not going to do that this year."But we will look to do that activity in the years ahead."

Santos is one of the largest oil and gas exploration and production companies in the Northern Territory with sites in Mereenie and the Amadeus, Bonaparte and McArthur basins. (April 30, 2015)

04/30/2015

SAUDI ARABIA:

Saudi Arabia will be second shale frontier

Saudi Arabia will be the second frontier for shale gas after the US, Saudi Aramco's Khalid A. Al-Falih told China's Caixin News Agency last week.

Al-Falih, who was elevated from Chief Executive to Chairman on Wednesday, said that the country is investing in shale and has identified three areas with strong shale gas potential.

"We're investing in shale gas. In fact, Saudi Arabia probably will be the second frontier for unconventional after the US. We have three areas in Saudi Arabia that we have identified as high potential for shale gas. One of them is in the northern part of the kingdom, close to the Jordanian border. That will come into **production in 2016, 2017**," Al-Falih told the news agency in an interview.

Al-Falih added that **close to 100 wells have already been drilled**.

"We know that it is feasible technologically, and we will make it commercially feasible by continuing to invest," Caixin quoted Al-Falih as saying. (April 29, 2015)

04/30/2015

PRODUCTION

CHINA:

BP highlights China's surging shale gas production

China will become the **world's second-largest shale gas producer by 2035, behind only North America**, a report by energy giant British Petroleum (BP) predicted on Tuesday.

From **2025 to 2035, China's shale gas output will grow by an average of 33%** every year. By 2035, **China and the United States will provide some 85% of global shale gas output**, according to the report.

BP's group chief economist Spencer Dale attributed the explosive growth to China's rich shale gas resources, government policy support to exploration, and China's current achievements in shale gas development.

Exploration of shale gas, an unconventional source of natural gas, has gathered pace in China as the government promotes the use of clean energy, but high exploration costs and sophisticated technological requirements have substantially restrained the sector's growth.

Whether China can bring in more private capital to the industry is the key for future development, Dale said.

The report also forecast that China will overtake the United States as the largest oil consumer around 2030.

By 2035, China's dependence rates on imports of oil and natural gas will **rise to 75% and 40%**, from the current **60% and 30%**, respectively, making China the world's biggest energy importer, according to the report.

The share of coal in China's energy mix will fall to 51% from the current 68% by 2035. Natural gas will take up 12% and oil 18%, said the report. (April 29, 2015)

04/29/2015

RUSSIA - NETHERLANDS:

Gazprom, dutch company Gasunie may cooperate on shale gas extraction

Russia's energy giant Gazprom and Dutch gas infrastructure company Gasunie examine the possibility of cooperation in the area of shale gas extraction, Gazprom's press office said in a statement on Wednesday.

Gasunie has a 9% share in Gazprom's Nord Stream pipeline bypassing Ukraine with Europe's gas transportation network. According to the companies' heads, the Nord Stream project contributes to diversification of gas-supply routes to Europe.

The Nord Stream is a 1,220 kilometers (760 miles) long offshore pipeline that pumps Russian natural gas from Siberia to Europe under the Baltic Sea, bypassing East European transit countries. It includes two parallel lines stretching across the Baltic Sea floor from Russia's Vyborg near the Finnish border to Greifswald on Germany's coast. (April 15, 2015)

04/16/2015

POLAND:

Polish oil, gas and petrochemicals

Due to recent disappointing shale drilling results, BMI has downgraded its long term gas production forecast. More times, additional exploration and below ground data will be needed to obtain a better idea of the country's actual shale gas potential and to optimise the drilling and hydraulic fracturing processes required for Poland's challenging geology.

BMI's gas consumption forecast for Poland has also been downgraded as the company becomes bearish on the country's switch to gas in the power sector. Concern about energy security, the unlikelihood of domestic **shale gas production before 2020** and concerns of rising electricity bills are providing little incentive for phasing out coal fired power generation and a switch to gas powered generation.

When it comes to oil production, levels are pretty low in Poland and BMI expect levels to continue on a downward trend. The country is going to remain largely dependent on crude oil imports. However, BMI has said that shale oil could constitute a long term upside risk to production, but this is unlikely to materialise by 2023. Refined product consumption is expected to increase to 2023, and will be largely driven by the transport sector. With growing fuel demand and no immediate plans for refining capacity expansion, BMI expects Poland's refined fuels production to remain close to current levels of 500 000 bpd to 2023. (April 14, 2015)

04/14/2015

CHINA:

Sinopec's 6-2HF shale well in Fuling producing 200,000 cu m per day of gas

Sinopec's shale gas well 6-2HF in Fuling area of southwest China's Chongqing municipality generated total output of over **150mcm** till April 2, Xinhua Finance reported citing a statement by Sinopec Group.

The well was put into formal **operation in September 2013** and currently generates **200,000 cubic meters of shale gas each day**.

It is estimated that the well has over **300mcm of recoverable reserves**, Xinhua Finance said.

Last year, Sinopec's Fuling field was verified by Chinese government as country's largest shale gas play. The Ministry of Land and Resources verified proven reserves of nearly **107bcm** in the Fuling shale gas field. (April 14, 2015)

04/15/2015

SUPPLIES - IMPORTS - EXPORTS

SAUDI ARABIA - USA:

Saudi basic industries to use US shale gas at its UK petrochemical plant

Saudi Basic Industries Corp (SABIC) has inked a deal to buy US shale gas from US to use at its Teesside petrochemical plant in Britain, acting chief executive Yousef Abdullah al-Benyan told Reuters on Sunday.

"In fact we did sign the contract - we have not yet agreed with the supplier to publicly announce it, but we did firm up a contract for gas supply," Benyan told the news agency, declining to name the supplier.

The details about the deal, Reuters reported, would be available by next quarter.

"It is going to meet our full demand for the next ten years and is renewable beyond ten years," Benyan said.

Last year, the company said it planned to upgrade its Teesside cracker to capitalise on shale gas opportunities in the United States. (April 19, 2015)

04/20/2015

GENERAL INFORMATION

FRANCE:

Buried shale gas report brings turbulence in France

The French government is under a difficult position as they never revealed a shale gas report which indicated safer methods, other than fracking, to mine the vast shale gas resources.

Today, French newspaper Le Figaro, published a story on the buried report which was commissioned in 2013 by former industry minister Arnaud Montebourg. According to The Local, the former minister is an outspoken advocate for clean mining of shale gas, and even though he refused to comment on the Le Figaro article he confirmed the authenticity of the report.

The Local reported that the French government had buried the shale gas report, in which experts stated France's shale gas deposits could be cleanly removed without the need for the divisive hydraulic fracturing or fracking. According to the report, France's shale gas deposits could be exploited using the "clean technology" of non-flammable propane, meaning there would be no need for hydraulic drilling.

The "confidential" **report was finished in 2014** but then passed on to the French government which didn't reveal that other ways for extracting the shale gas resources are plausible. The shale gas debate was narrowed down to the fracking process, which according to many experts it can damage the underground water resources. Fracking involves deep-bore drilling and use of high-pressured, chemically treated water to blast apart rock to release the gas trapped inside.

France is sitting on one of the biggest deposits of shale gas in Western Europe, which is enough to supply the country for decades. According to French Newspaper France Soir, the government hide an information about a move that would reportedly lead to earnings for France of **€100 billion** and that would **create between 120,000 and 225,000 new jobs**.

Ecology Minister Ségolène Royal, responded to Le Figaro on Twitter, saying that the government had "nothing to hide" and that shale gas extraction was no longer a "valid" topic. (April 7, 2015)

04/07/2015

MEXICO:

Mexico plans to cut scope of shale tenders

Mexico's government is preparing to downsize tenders of shale oil and gas blocks to oil companies, as low oil prices have reduced the profitability of the difficult-to-reach hydrocarbons, according to senior Mexican officials.

The tenders, part of this year's oil bidding round, likely will include only a portion of the 70 blocks originally planned, said three government officials with knowledge of the situation.

The government still is assessing exactly how many blocks will be offered, but one of the officials said it could be less than half of the original plan.

Terms for bidding on shale blocks likely will be announced in August or September, they said, following the launch of tenders for shallow-water, onshore and deep-water blocks. Bids for shale initially had been planned for January 2015.

Shale deposits were originally a central component of this year's round of private oil tenders, Mexico's first in eight decades thanks to new laws passed in 2013 and 2014 that ended the state's monopoly on the oil industry.

But with oil around \$55 a barrel, a 45% drop from last July, the attractiveness and profitability of exploring for and producing shale gas and oil have fallen dramatically, prompting Mexico to change the size and the timetable for the tenders.

Mexico's government expects oil prices to stabilize at around current levels, possibly recovering in the coming months, the officials said.

The drop in oil prices and change of plans add pressure to President Enrique Peña Nieto's promise to increase oil production by 500,000 barrels a day by 2018. Mexico currently produces about 2.3 million barrels a day.

Most of the additional production in the next three years is expected to come from the joint ventures that state oil company Petróleos Mexicanos can form with private companies thanks to the energy overhaul, although shale oil and gas tenders also were expected to contribute.

The original plan included 70 blocks of shale resources out of a total of 169 blocks being offered in the first round of oil bids. One of the officials said some of the original shale blocks could be transferred to a second round of oil tenders to be announced in 2016.

Mexico has the world's sixth- and eighth-largest potential reserves of shale gas and shale oil, respectively, according to the U.S. Energy Information Administration. Despite the huge potential, state firm Pemex has only drilled 18 wells, and has no commercial production in shale. Mexico's shale resources are mainly in the Gulf state of Veracruz and in the northern states of Tamaulipas and Coahuila. (April 27, 2015)

04/28/2015

PUBLICATIONS

UNITED KINGDOM:

Liverpool could be shale gas 'centre of excellence'

Developing a supply hub for the shale gas industry could **bring a £30bn** boost for the Northern economy and **support 13,000 jobs**, with Liverpool at the centre.

That was the thrust of a new report being delivered to Shale World, the UK's biggest shale gas conference, in Birmingham today.

The report, compiled by AMION Consulting, was commissioned by Peel Gas & Oil, a subsidiary of the Peel Group set up in February to work with the emerging shale gas industry.

Peel also owns the Ocean Gateway - the Port of Liverpool, Salford Port, and the Manchester Ship Canal that connects them - which it says could become an "international centre of excellence" in any shale gas supply operation for the region.

Developing a supply chain in the region would support 13,000 jobs, more than double the amount without a supply hub, says the report.

The figures are based on the development of **100 well pad sites in the Bowland Shale, an area covering the Midlands and the North of England.**

It is estimated that developing the sector will generate a spend of around **£30bn up to 2048.** (April 16, 2015)

04/16/2015

TIGHT GAS

PRODUCTION

OMAN:

BP to complete 16 wells in Khazzan tight gas field by year end

BP will **complete 16 wells in Khazzan tight gas field in Oman's Block 61** and will have **at least nine rigs in operation by the end of this year**, Times of Oman reported Sunday.

Dave Campbell, chief operating officer, BP Oman, said the company is committed to meet a **2017 target to deliver first gas** adding that the Khazzan project **is on track, on budget and on schedule**.

The full field development of the Khazzan project will involve a drilling program of around **300 wells over 15 years to deliver plateau production of one billion cubic feet (28.3 million cubic metres) of gas per day**.

"We have made good progress to date and this year, we will start **20 and will complete 16 wells**," Campbell said, adding that **14 wells are planned to be fractured and stimulated in 2015**.

Sanctioned in December 2013, the Khazzan project represents the first phase in the development of one of the Middle East region's largest unconventional tight gas plays. (April 7, 2015)

04/08/2015
